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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,700	09/09/2003	Jarko Niemenmaa	59643.00232	8753

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EXAMINER

SHEDRICK, CHARLES TERRELL

ART UNIT	PAPER NUMBER
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2687

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/657,700	Applicant(s) NIEMENMAA, JARKO	
	Examiner Charles Shedrick	Art Unit 2687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/9/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-21 have been examined.

Drawings

2. New replacement drawings are required in this application. See the attached Notice of Draftsperson's Patent Drawing Review for appropriate corrections. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed, *such as "Locating a mobile during Handover"*.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Zadeh et al., (U.S. Patent # 6,047,182).

Consider **claim 1**, Zadeh et al., clearly show (**figure 2**) and disclose a method (**abstract**) of locating user equipment **200 (figure 2)** in a communication network **10 (figure 1)**, the method comprising; requesting a location of user equipment which is communicating on a first channel (**figure 3A and column 4 lines 44-53**); initiating a determination of the location of the user equipment **200 (figure 2 and 3A and column 4 lines 54-65)**; and handing over the user equipment for communicating on a second channel (**column 4 lines 18-22 and column 4 lines 61 – column 5 line 20**), wherein said determination of the location of the user equipment **200** is suspend until said handling over has been completed (**figures 3A and 3B, and column 5 lines 12 –35**).

Consider **claim 2**, and as applied to **claim 1** above, Zadeh et al., also show and disclose a method further comprising receiving a signal indicating that the step of handing over has started (i.e., the base station acknowledges the channel activation message once it is received)(325 **figure 3A and column 4 lines 61-67**).

Consider **claim 3**, and as applied to **claim 1** above, Zadeh et al., also show and disclose a method further comprising controlling the first and second channels by a same controller **240** (**figure 2 and column 4 lines 44-67**)

Consider **claim 4**, and as applied to **claim 3** above, Zadeh et al., also show and disclose wherein the step of controlling the first and second channels by a same controller comprises controlling the first and second channels by a base station controller **240** (**column 4 lines 44-67, column 5 lines 12 –20, figure 2 and figure 3b**).

Consider **claim 5**, and as applied to **claim 4** above, Zadeh et al., also show and disclose wherein the base station controller **240** (**figure 2**) controls a plurality of base stations **210, 230** (**figure 2**) (**column 1 lines 45-50**) (i.e., the base station controller may be connected to several base transceiver stations).

Consider **claim 6**, and as applied to **claim 1** above, Zadeh et al., also show and disclose wherein the step of requesting a location of comprises requesting a location of a mobile station **200** (**figure 2, column 2 lines 20-32, and column 4 lines 44-53**).

Consider **claim 7**, and as applied to **claim 1** above, Zadeh et al., also disclose a method wherein the determination of the user equipment **200** comprises using a time difference of arrival (TDOA) method (i.e., all methods using range difference may be called TDOA. The

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propagation delay, which depends on distance and further comprises the TA values are expressed in bit periods and can range from 0 to 63) (**column 2 lines 29-44**)

Consider **claim 8**, and **as applied to claim 7 above**, Zadeh et al., also show and disclose a method wherein the communication network **10 (figure 1)** comprise a wireless communication system (**figure 1**) having a plurality of base stations **210, 220, and 230 (figure 2)**, each having a location measuring unit (i.e., unit measuring the location or in the Zadeh et al., case a unit which calculates the TA values)(**column 2 lines 30-66**), the initiating step further comprises using signals received at a plurality of location measuring units of respective base stations from said user equipment **200 (figure 2 and column 2 lines 30-66)**.

Consider **claim 9**, Zadeh et al., clearly show a system (**figure 1**) for locating user equipment **20 (figure 1)** in a communication network **10 (figure 1)**, the system comprising; a location entity (i.e., PC 270) (**figure 2**); a controller (i.e., application 280)(**figure 2**), configured to send a request to the location entity for locating user equipment which is configured to communicate on a first channel (**figure 3A and column 4 lines 44-53**), the location entity being configured to initiate a determination of a location of said user equipment (**figure 2 and 3A and column 4 lines 54-65**), wherein when said user equipment is being handed over to communicate on the second channel (**column 4 lines 18-22 and column 4 lines 61 – column 5 line 20**), the location entity is configured to suspend the determination of the location of the user equipment until handing over has been completed. (**figure 3A, 3B, and column 5 lines 4 – 52**).

Consider **claim 10**, and **as applied to claim 9 above**, Zadeh et al., further disclose the system (**figure 1**) wherein the first and second channels are controlled by the same controller **240 (figure 2)**.

Consider **claim 11**, and as applied to **claim 9** above, Zadeh et al., further disclose the system (figure 1) wherein the location entity comprises a serving mobile location center (position center 270 figure 2) (i.e., the position center calculates the location of the mobile station).

Consider **claim 12**, and as applied to **claim 9** above, Zadeh et al., further disclose the system (figure 1) wherein the location entity is configured to use time difference of arrival method (i.e., all methods using range difference may be called TDOA. The propagation delay, which depends on distance and further comprises the TA values are expressed in bit periods and can range from 0 to 63) (**column 2 lines 29-44**)

Consider **claim 13**, Zadeh et al., show and disclose a location entity (i.e., the positioning center 270)(figure 2) for use in a system (figure 1) for locating user equipment 200 (figure 2) in a communication network 10 (figure 1), the system comprising a controller (i.e. application 280) (figure 2), and said location entity being configure to:

Receive a request from a controller for locating user equipment which is configured to communicate on a first channel (**figure 3A and column 4 lines 44-53**); initiate a determination of a location (**figure 2 and 3A and column 4 lines 54-65**), wherein said location entity is configured so that when the user equipment is being handed over to communicate on a second channel (**column 4 lines 18-22 and column 4 lines 61 – column 5 line 20**), determination of the location of the user equipment is suspended until said handing over has been completed (**figures 3A and 3B, and column 5 lines 12 –35**).

Consider **claim 14**, Zadeh et al., clearly show (**figure 2**) and disclose a system (**figure 1**) of locating user equipment 20,200 (**figures 1 and 2**) in a communication network 10 (**figure 1**), the system comprising; requesting means (i.e., an application request)(280 **figure 2**) for location

of user equipment which is communicating on a first channel; initiating means (i.e., an application or PC 270 to initiate request) (**figure 2**) for a determination of the location of the user equipment **200** (**figure 2, column 2 lines 20-29, and column 4 lines 44-60**); and handing over means (e.g., BSC 240)(**figure 2**) for handing over the user equipment for communicating on a second channel (**column 4 lines 54-65**), wherein said determination of the location of the user equipment **200** is suspend until said handling over has been completed (**figure 3A,3B, and column 5 lines 4 –52**).

Consider **claim 15**,and as applied to **claim 14 above**, Zadeh et al., also show and disclose a system further comprising receiving means for receiving a signal indicating that the step of handing over has started (i.e., the base station acknowledges the channel activation message once it is received)(**325 figure 3A and column 4 lines 61-67**).

Consider **claim 16**, and as applied to **claim 14 above**, Zadeh et al., also show and disclose a system further comprising controlling the first and second channels by the same controller **240** (**column 5 lines 12 –20 figure 2, and figure 3b**).

Consider **claim 17**,and as applied to **claim 16 above**, Zadeh et al., also show and disclose a system wherein the controller is a base station controller **240** (**column 5 lines 12 –20 figure 2 and figure 3b**).

Consider **claim 18**,and as applied to **claim 17 above**, Zadeh et al., also show and disclose a system wherein the base station controller **240** (**figure 2**) controls a plurality of base stations **210,230** (**figure 2**) (also see column 1 lines 45-50 (i.e., the base station controller may be connected to several base transceiver stations)).

Consider **claim 19**, and as applied to **claim 14** above, Zadeh et al., also show and disclose wherein the user equipment comprises requesting a location of a mobile station **200** (**figure 2** and **column 2 lines 20-32**).

Consider **claim 20**, and as applied to **claim 14** above, Zadeh et al., also disclose a system wherein the determination of the location of the user equipment **200** comprises using a time difference of arrival (TDOA) method (i.e., all methods using range difference may be called TDOA. The propagation delay, which depends on distance and further comprises the TA values are expressed in bit periods and can range from 0 to 63) (**column 2 lines 29-44**)

Consider **claim 21**, and as applied to **claim 20** above, Zadeh et al., also show and disclose a system wherein the communication network **10** (**figure 1**) comprise a wireless communication system (**figure 1**) having a plurality of base stations **210, 220**, and **230** (**figure 2**), each having a location measuring unit (i.e., unit measuring the location or in the Zadeh et al., case a unit which calculates the TA values) (**column 2 lines 30-66**), the initiating means (i.e., positioning center, **270**) using signals received at a plurality of location measuring units of respective base stations from said user equipment **200** (**figure 2**, and **column 2, lines 30 - 59**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Shedrick whose telephone number is (571)-272-8621. The examiner can normally be reached on Monday thru Friday 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kincaid Lester can be reached on (571)-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles Shedrick
Art Unit 2687
July 12, 2005


7/25/05
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SUPERVISORY PRIMARY EXAMINER